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Agency

Office of
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Remedial Response

EPA/ROD/R03-91/114
June 1991

Superfund Record of Decision:

Publicker/Cuyahoga Wrecking Plant, PA

50272-101

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15. Supplementary Notes

16. Abstract (Limit: 200 words)

The 37-acre Publicker/Cuyahoga Wrecking Plant site is a former liquor and industrial alcohol distillery in Philadelphia, Philadelphia County, Pennsylvania. Surrounding land use is primarily industrial, with 400,000 people living within a 1-mile radius of the site. From 1912 until 1986 when the plant closed, alcohol distilling operations were conducted onsite. From the 1970s to 1980s, the site was also used as a petroleum and chemical storage facility, which utilized 440 large above-ground tanks, stored chemicals, chemical laboratories, reaction vessels, production buildings, warehouses, a power plant, and several hundred miles of above-ground process lines, many of which were wrapped with asbestos insulation. In 1987 a CO_2 utilization area was destroyed in an onsite fire, which was accompanied by numerous explosions. Subsequent onsite inspections by EPA and the State identified leaking tanks, pits, and process lines containing fuel oil, and shock-sensitive explosive materials, and 7,000 gallons of reactive and flammable materials in fermentation tanks and grain dryers. In 1987, EPA stabilized the site by bulking flammable and explosive materials onsite for future disposal, disposing of highly reactive laboratory wastes and cylinders offsite, crushing 3,100 empty drums, wrapping overhead asbestos-covered process lines with

(See Attached Page)

17. Document Analysis a. Descriptors

Record of Decision - Publicker/Cuyahoga Wrecking Plant, PA
Second Remedial Action
Contaminated Medium: debris
Key Contaminants: inorganics (asbestos)

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report) None	21. No. of Pages 30
	20. Security Class (This Page) None	22. Price

(See ANSI-Z39.18) *See Instructions on Reverse*

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

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plastic, and bagging and storing loose asbestos materials onsite. A 1989 Record of Decision (ROD) addressed Operable Unit 1 (OU1) and provided for offsite treatment and disposal of hazardous waste streams and chemicals recovered from within the process lines, demolition of the above-ground process lines, and packaging and onsite storage of asbestos and other insulation materials. This ROD addresses a portion of OU2, specifically the bulked asbestos stored onsite, any remaining asbestos material attached to overhead exterior pipelines, and a pile of asbestos debris near a loading pier. A subsequent ROD will address onsite soil and ground water contamination. The primary contaminant of concern present as debris is asbestos, an inorganic.

The selected remedial action for this site includes removing approximately 150 cubic yards of asbestos from overhead extraction pipes and placing this material in plastic bags; staging this material, along with 6 cubic yards of asbestos from near a loading pier and 1,100 cubic yards of bagged asbestos from previous removal and remedial actions; and disposing of the staged asbestos offsite. The estimated present worth cost for this remedial action is $293,420. There are no O&M costs associated with this remedial action.

PERFORMANCE STANDARDS OR GOALS: All bulked and remaining loose asbestos material will be removed from the site. No specific cleanup standard for asbestos was provided.

RECORD OF DECISION
PUBLICKER INDUSTRIES SITE

DECLARATION

SITE NAME AND LOCATION

Publicker Industries Site
City Of Philadelphia, Philadelphia County, Pennsylvania

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected remedial action for the second operable unit (OU-2) for the Publicker Industries Site in Philadelphia, PA, which was chosen in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

This decision is based upon the Administrative Record for the site (index attached).

The Commonwealth of Pennsylvania agrees with the selected remedy.

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from the site, if not addressed by implementing the response action selected in this Record of Decision (ROD), may present an imminent and substantial endangerment to public health, welfare, or the environment.

DESCRIPTION OF THE SELECTED REMEDY

This early final remedial action, which is the second operable unit (OU-2) for the site, addresses a principal threat at the site by removing bulked asbestos and other asbestos-containing material to an offsite disposal facility.

A Remedial Investigation/Feasibility Study (RI/FS) is currently under way for the soil and ground water. When the RI/FS is completed another decision will be made for the soil and ground water operable unit.

The selected remedy includes the following major components:

* Removal of remaining asbestos from piping staged throughout the site; placement in secure packaging (plastic bags); and staging and preparation for transport and disposal

* Collection of all asbestos waste previously packaged and staged at the site; repackaging it if necessary; and preparation for transport and disposal

* Transportation of all asbestos wastes to a permitted offsite disposal facility (landfill).

STATUTORY DETERMINATIONS

The selected remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies to the maximum extent practicable for this site. However, because treatment of the asbestos materials at the site was not found to be the best alternative, the statutory preference for treatment has not been met but a permanent remedy for the site has still been selected.

Because this remedy will not result in hazardous substances onsite above health-based levels, the five-year review will not apply to this action.

Edwin B. Erickson
Regional Administrator
Region III

6-25-91
Date

Remedial Alternative Record of Decision Summary
Publicker Industries Site

Site Name, Location and Description

The Publicker Industries Site is located in the southeastern portion of the City of Philadelphia, Pennsylvania (see Figure 1). The Site is bordered to the east by the Delaware River, to the north by the Ashland Chemical Company, to the south by the Packer Marine Terminal and New Orleans Cold Storage, and to the west by Delaware Avenue. The Site is adjacent to and under the Walt Whitman Bridge which spans the Delaware River from Philadelphia to New Jersey.

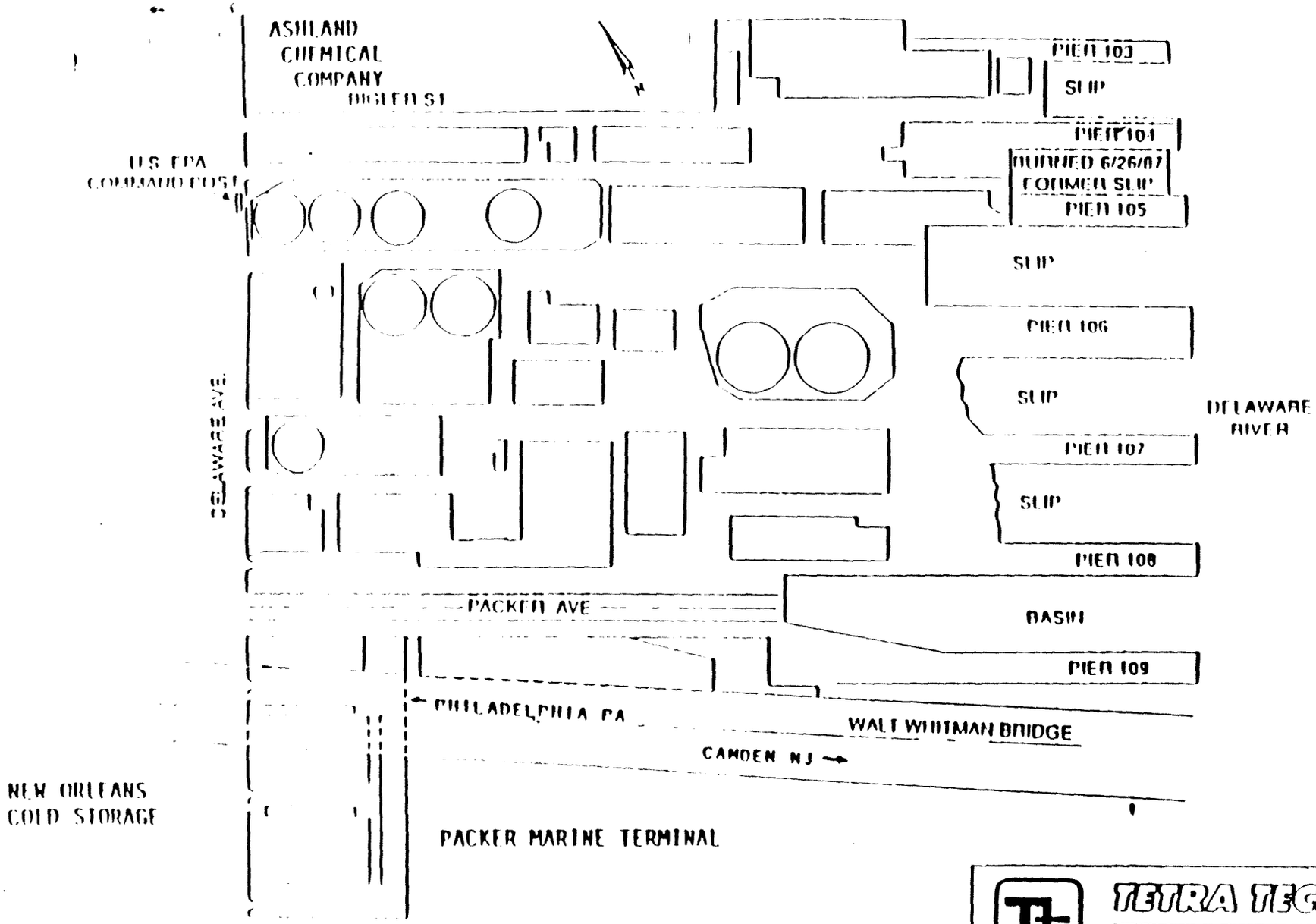
The Site is located within the Atlantic Coastal Plain Province. The Site is underlain by Holocene age sediments, the Pleistocene age Trenton Gravel, and the Cretaceous age Potomac-Raritan-Magothy (PRM) formations.

Two types of aquifers have been identified at the Site: an unconfined aquifer consisting of Holocene sediments and the Trenton Gravel; and a confined aquifer consisting of various sand units in the PRM. Neither aquifer apparently is used as a public source of water in Pennsylvania, however, the confined aquifer(s) are used extensively for water supply in New Jersey. Both aquifers are presumably being recharged to some limited extent from precipitation at the Site.

The area is primarily industrial; however, there are major population centers within one mile. In addition, there are several businesses (primarily food plants), the Philadelphia Naval shipyard, two large outdoor Sports Arenas and Interstate 95 nearby (See Figure 2). Center city Philadelphia is approximately two miles from the Site. Within three-quarters of a mile are the cities of Gloucester and Camden, New Jersey.

An estimated population of 400,000 people lives within approximately one mile of the Site. Three schools and two hospitals are located within a one and one-half mile radius of the Site.

Publicker Industries had operated a liquor and industrial alcohol distillation process at the Site until approximately 1986. The Site is approximately 37 acres in area and included nearly 440 large tanks, storage drums, product stock,



NO SCALE

TETRA TECH, INC.

SITE LOCATION MAP
PUBLICKER SITE

chemical laboratories, reaction vessels, production buildings, warehouses, a power plant and an estimated several hundred miles of above-ground process lines. Many of the above-ground process lines were formally wrapped with asbestos insulation. The general layout of the Site and surrounding area is shown on Figure 2.

Many of the existing structures have deteriorated due to weather, fire and neglect. The facility has three water-front piers that extend into the Delaware River.

Nineteen deep production wells (See Figure 2), ranging in depth from 150 to 200 feet, are reported to exist on the Site property. (Only 15 of the 19 wells have been located from existing Site maps.) These deep wells were installed 40 to 50 years ago to supply cooling water to heavy equipment at the facility.

Site History and Enforcement Activities

Site History

Publicker Industries, Inc. is a publicly held corporation headquartered in Old Greenwich, Connecticut. From approximately 1912 to late 1985, Publicker owned and operated a liquor and industrial alcohol manufacturing plant at the Site. The Publicker facility fermented potatoes, molasses, corn, and various grains, and distilled the alcohols. The alcohols were used in numerous products including whiskey, solvents, cleansers, antifreeze, and rubbing alcohol. The plant's production peaked during World War II and again in the 1970s. During these times, the plant employed over 1,000 people. The Site also was utilized as a petroleum and chemical storage facility during the late 1970s and early 1980s.

Plant operations had been in decline since the late 1970s and employment had decreased to 5 people before Publicker discontinued operations in February 1986. In 1986, Publicker sold the property to Overland Corporation, a subsidiary of Cuyahoga Wrecking Corporation.

During demolition activities, two Cuyahoga employees were killed by an explosion that resulted from the cutting of a process line with a torch. Shortly after this incident, Overland Corporation declared bankruptcy and abandoned the facility. The property is administered by a bankruptcy trustee.

In June of 1987, the carbon dioxide utilization portion of the facility was destroyed in a multi-alarm fire. During the fire, numerous explosions and fire flares were reported which led fire officials and the U.S. Environmental Protection Agency (EPA) emergency response personnel to believe that chemical products were still present at the facility.

An initial Site inspection was conducted by EPA and its support staff on July 9, 1987. City of Philadelphia representatives were also onsite to inspect portions of the facility that were not affected by the fire. Numerous spill areas, improper drum storage and leaking process lines were observed by the inspection team. A sheen, originating from the Site was apparent in the waters of the Delaware River.

Tanks, pits/sumps, and numerous process lines onsite were found to contain fuel oils or other contaminated oils. (Pesticides and volatile organic compounds not commonly found in fuel oils have been identified as contaminants in some of these oils.) EPA has determined that a major quantity of this contaminated oil is contained in unsound storage vessels (leaking pipelines and tanks). It has been estimated that 252,000 gallons of unsecured contaminated oil had been previously stored onsite.

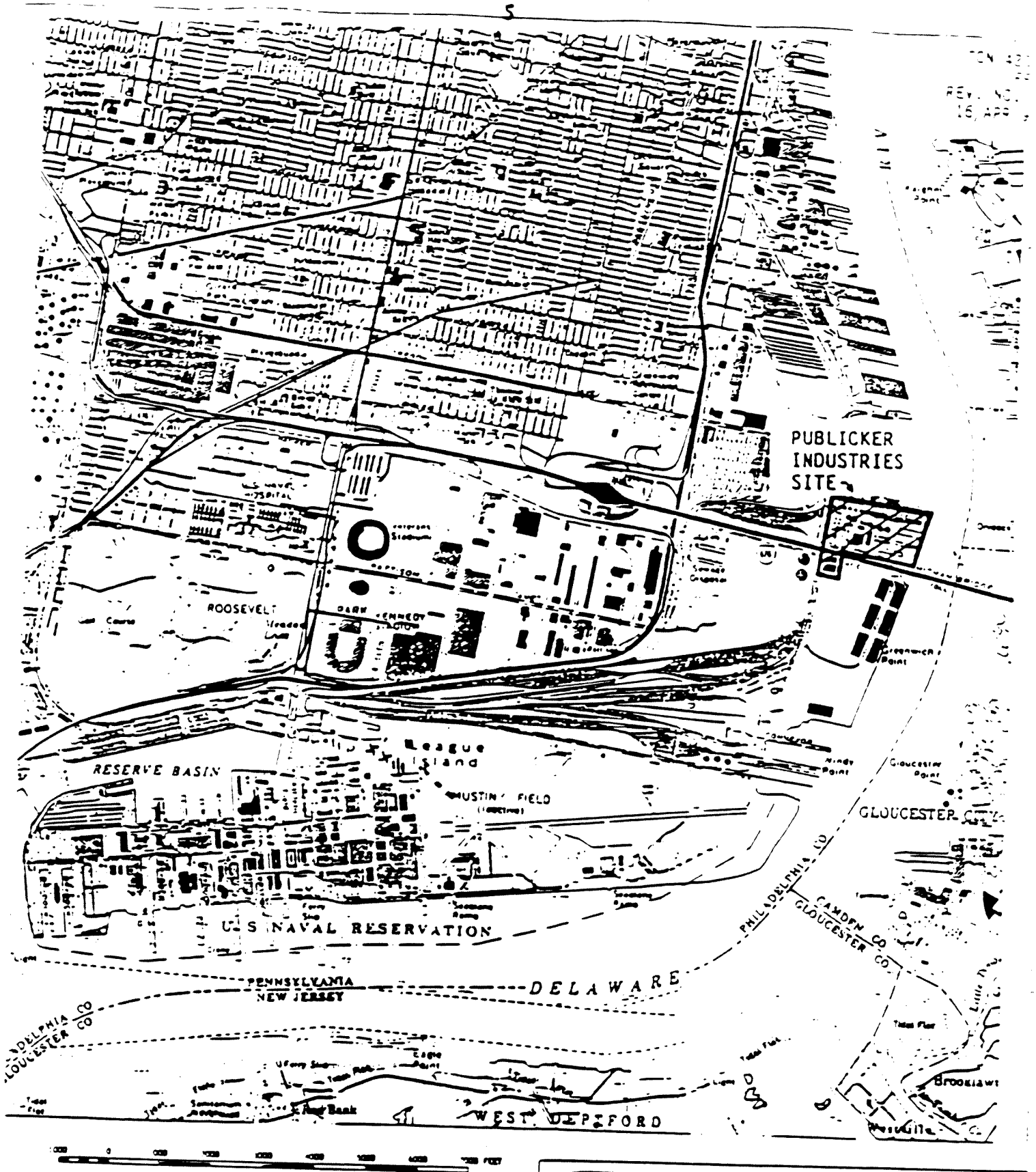
In addition to these waste products, further inspections and inventories identified shock-sensitive and explosive materials throughout the facility.

Tanks containing spent grain material from the whiskey manufacturing operation were determined by EPA to contain approximately 70,000 gallons of reactive and flammable layers/ phases that exhibit characteristic RCRA wastes. These tanks contain residual grain materials collected from fermentation tanks and grain dryers. Analysis of these tanks shows that layers of flammable (flash point less than 140 degrees Fahrenheit) and reactive materials are present.

As determined by analysis conducted in 1989, asbestos-containing materials are ubiquitous at the Site, particularly in relation to building materials and piping insulation. Approximately 1,200 to 1,300 cubic yards of asbestos waste exists at the Site. Most of this waste was originally piping insulation, and was previously removed from above-ground piping that was dismantled during the period 1988-1990 by EPA Emergency Response/Removal contractors. A large portion of the asbestos waste is currently secured and staged in bags in several locations at the Site. A small amount, however, remains attached to and exposed on piping throughout the Site.

The integrity of many of the Site structures is poor due to past fires, neglect, and the age of the facility. Although much of the asbestos was consolidated during the removal action, the potential threat of release remains.

Due to these Site conditions, a 24-hour fire and security watch was instituted. Despite this full Site security and the fence surrounding the Site, vandals were trespassing.



TETRA TECH, INC.

Figure 2
GENERAL SITE LOCATION MAP
PUBLICKER SITE

SOURCE: USGS QUADRANGLE-PHILADELPHIA

On December 8, 1987, an EPA site-safety coordinator conducted a Site inspection of the facility. During this visual inspection, it was determined that Site conditions continued to present threats to human health and the environment. An EPA on-scene coordinator (OSC) immediately initiated a removal action using CERCLA emergency funds.

During the Emergency Removal Action, EPA significantly stabilized conditions at the Site by addressing the various fire and explosion threats. Wherever possible, solid and liquid waste streams were bulked onsite and stored for future disposal. Highly reactive lab wastes and cylinders were transported offsite for disposal. All materials removed from the Site were transported to facilities regulated under the Resource Conservation and Recovery Act (RCRA) and the Toxic Substances Control Act (TSCA). Approximately 3,100 emptied drums were crushed onsite after bulking operations were completed. Overhead pipelines insulated with asbestos coverings were wrapped with plastic where necessary to abate the potential for the airborne release of friable asbestos material. Asbestos droppings and piles randomly located throughout the Site were bagged and stored onsite. Buildings which were found to contain asbestos were secured and warning signs posted. This bulked asbestos and the remaining asbestos coverings on the exterior overhead pipelines is what this ROD addresses.

To deter trespassing and unauthorized entry and exit of vehicles at the Site, concrete barriers and snow fencing were installed along Packer and Delaware Avenues. This has slowed scavengers, but has not stopped them. EPA notified the Philadelphia police Department that the Agency would be withdrawing site security at the completion of the action for OU-1. The Philadelphia Police Department planned to increase surveillance of the Site.

Emergency removal activities ended on December 16, 1988.

On May 5, 1989, the Site was proposed on the National Priorities List (NPL). In October 1989, the Site was finalized on the NPL A ROD for OU 1 was signed on June 30, 1989, for offsite treatment and disposal in RCRA permitted facilities of the various waste streams and hazardous chemicals recovered from within the process lines. The ROD also authorized demolition of above-grade process lines that traverse the Site (including the removal of asbestos-containing materials); packaging of the insulation materials removed from the process lines (including asbestos); and storage of this asbestos. EPA discontinued the 24-hour fire and security watch after the Site was stabilized as a result of OU 1 remedial actions. Before the Site security watch was pulled, EPA ensured that the asbestos was bagged and secured in a building and staging areas.

Enforcement Activities

On September 4, 1987, EPA and Publicker Industries entered into a Consent Order under Section 106 of CERCLA, as amended, 42 U.S.C. Section 9606. Under the Consent Order, Publicker hired O.H. Materials of Findley Ohio to perform site stabilization measures. These measures focused on assessing the Site and identifying the presence and nature of hazardous substances at the Site.

On June 13, 1988, Bruga Corporation (Bruga) entered into a. Consent Order under CERCLA Section 106, 42 U.S.C. Section 9606. The Consent Order required Bruga to dismantle and decontaminate, if necessary, all equipment that was removed from the Site. This work has been completed.

On December 8, 1988, EPA and AAA Warehousing, Inc. (AAA) of Brooklyn, New York entered into a Consent Order under CERCLA Section 106, 42 U.S.C. Section 9606, whereby AAA was granted permission to remove from the Site some stainless steel tanks and rail tank cars which AAA owned. Removal of AAA's property began December 9, 1988. All seven rail tank cars have been transported offsite; however, the stainless steel tanks have not been removed.

Highlights of Community Participation

The public participation requirements of CERCLA Sections 113(k)(2)(B)(i-v) and 117 42 U.S.C. Sections 9613(k)(2)(B)(i-v) and 9617 have been met by the following activities.

The notice of availability for the Administrative Record was published on February 4, 1991 and April 5, 1991 in the Philadelphia Daily News. The Focused Feasibility Study (FFS) and Proposed Plan for the Publicker Site were released to the public on April 29, 1991. The notice of availability for the FFS and proposed plan was also published in the Philadelphia Daily News on April 29, 1991. These documents were made available to the public in both the administrative record and the information repository maintained at:

US E.P.A.
841 Chestnut Building
Philadelphia, PA 19107
(215)597-3037

A public comment period was held from April 29, 1991 to May 28, 1991. There was a request for a time extension to this comment period. The public comment period was extended to June 11, 1991. There was little public interest in the proposed plan and there was no request for a public meeting. A response to the comments received during this period is included in the Responsiveness Summary, which is part of this ROD. This ROD presents the

selected remedial action for the Publicker Site, chosen in accordance with CERCLA, as amended by SARA and, to the extent practicable, the NCP. The decision for this Site is based on the Administrative Record.

Scope and Role of Operable Unit

As previously mentioned, Emergency Removal activities were conducted beginning in December 1987, to stabilize various fire and explosion threats at the Site.

On June 30, 1989, the ROD for the first OU was signed. As previously mentioned, the ROD was for offsite treatment and disposal in RCRA permitted facilities of the various waste streams and hazardous chemicals, recovered from within the process lines. That ROD also authorized demolition of above-grade process lines that traverse the Site (including the removal of asbestos-containing materials); packaging of the insulation materials removed from the process lines (including asbestos); and storage of this asbestos.

This ROD for OU-2 will address the asbestos materials that were bagged, staged, and covered resulting from the prior EPA removal actions or from remedial actions associated with the implementation of the June 30, 1989 ROD. This asbestos is considered a principal threat at this Site because it is a highly mobile, highly toxic material.

Only the currently staged asbestos and the exposed asbestos on pipes that are staged on the ground throughout the Site, will be addressed in this remedial action. The asbestos associated with the integral parts of the buildings (i.e., in the walls and ceilings) will be addressed in a subsequent actions. In addition, an RI/FS is currently under way for the soil and groundwater.

Summary of Site Characteristics

As mentioned above, asbestos-containing materials (asbestos is a carcinogen) are ubiquitous at the Site, particularly in relation to building materials and piping insulation.

Samples of the fiberous materials were taken by EPA and sent to the Electron-Microscopy Service Laboratories Inc. that showed asbestos was present.

Most of the asbestos waste being addressed in this action is related to the previous site response actions. The initial EPA emergency removal implemented from December 1987 to December 1988 included asbestos-related actions. In compliance with the Site stabilization of the 1989 ROD, the liquid contents of an extensive above-ground process line network were removed by EPA

remedial action subcontractors. The dismantling of the above-ground piping systems at the Site resulted in the generation of friable asbestos wastes, which formerly surrounded the pipelines as insulation materials. The majority of the asbestos material was bagged by the remedial action subcontractors and stored onsite. The total volume of bagged asbestos wastes that were stored resulting from the removal and remedial actions is estimated at 1,100 cubic yards. Some piping-related asbestos was not bagged; some asbestos was left intact on some of the dismantled piping and covered with plastic.

Approximately 150 cubic yards of asbestos material was estimated to remain intact around sections of piping located throughout the Site. The protective plastic coverings that were placed on these pipes during the previous actions have become loose, or have blown or have been torn from the piping. Consequently, most of the asbestos material remaining on these pipes is not secured. In addition, numerous sections of asbestos-covered pipe (approximately 500 lineal feet) were not covered with plastic.

A pile of debris of approximately six cubic yards in volume, located adjacent to Pier 104, was identified as consisting of 50-lb. bags of "pure asbestos". Tarps covering one building that was believed to be used as one of the staging areas for the bagged asbestos have been vandalized, thus this asbestos is not completely secured.

The total estimated volume of asbestos waste to be addressed by this operable unit is 1,200 to 1,300 cubic yards.

Once exposed to the elements, asbestos materials may migrate from their original locations via several pathways. The primary pathway of migration for friable asbestos is air (wind) as emissions, followed by transport in surface water as runoff, and transport in groundwater via surface infiltration and percolation. The fibrous nature of asbestos creates a high length-to-width ratio, which results in a relatively great surface area. This characteristic potentially enables asbestos to be transported in wind or water to potentially great distances, and may create a wide dispersion area. Additionally, asbestos is relatively chemically inert, thus it does not readily decompose into benign constituents.

The populations that could be exposed to the asbestos onsite or migrating from the Site are Site trespassers and the nearby surrounding populations. The environmental areas that could be exposed are the Delaware River and the surrounding soils, surface water, and groundwater.

Summary of Site Risks

This remedial action is an early final action The risk assessment is qualitative and does not attempt to assess all environmental concerns and potential exposure pathways associated with the entire Site. Therefore any residual risk at the Site may be addressed in a later action.

Asbestos is identified as a Class A carcinogen, which means that it is a known human carcinogen. It is also an animal carcinogen. Exposure limits for airborne asbestos have been determined by the National Institute for Occupational Safety and Health (NIOSH) and are regulated through the Occupational Safety and Health Act (OSHA) for occupational exposure, based upon an 8-hour Time Weighted Average (TWA) workday. The most recent NIOSH (1988) recommended exposure limits (REL) for asbestos is 0.1 fibers per cubic centimeter (fibers/cc), for fibers greater than 5 microns (um) in length. The OSHA Permissible Exposure Limit (PEL) TWA is 0.2 fibers/cc, with an action level set at 0.1 fiber/cc, and a 30 minute excursion limit of 1 fiber/cc (OSHA, 29 C.F.R. Sections 1910.1001, and 1926.58).

Ingestion of asbestos in drinking water is regulated directly under the Safe Drinking Water Act. The Maximum Contaminant Level and the Maximum Contaminant Level Goal (MCLG) are both 7 x 10-6 fibers per liter. A fiber is defined as 10 microns in length or longer (January 30, 1991 56 Fed. Reg. 3526). Ingestion of asbestos via surface water and organisms is regulated under the Clean Water Act. The ambient water quality criterion (AWQC) for asbestos is 3 x 10-4 fibers per liter.

Due to the widespread occurrence of uncontained asbestos materials observed on the Site, it is possible that asbestos has been and continues to be entrained in air and dispersed over some area. The potential for exposure exists due to: this potential for widespread occurrence; the ability of asbestos to be transported to potentially great distances via air or water; the carcinogenic nature of asbestos; the frequent presence of trespassers at the Site; and the dense populations centers nearby the Site. Furthermore, if there were to be another fire, releases of asbestos to the air would likely occur. The threat of fire exists because of the vandals trespassing onsite.

Primary potential exposure pathways to humans and terrestrial and aquatic organisms (environmental receptors) to asbestos at the Site include:

- Inhalation of airborne emissions (wind); and
- Direct contact with concentrated asbestos wastes.

Secondary potential exposure pathways of human and terrestrial and aquatic organisms include:

- o Ingestion of surface water runoff (Delaware River);
- o Ingestion of shallow groundwater discharging to surface water courses (Delaware River); and
- o Ingestion by consumption of contaminated groundwater.

Receptors via inhalation, direct contact, and ingestion of both surface water and groundwater are primarily humans, but may include terrestrial organisms on and in the shallow Site soils, and aquatic organisms in the Delaware River. The area over which asbestos contamination from the Site potentially exists is not known.

The probability of the secondary potential pathways as significant routes of exposure is generally expected to be minimal because there is little or no evidence that asbestos migrates downward or laterally through the soil (USEPA, Enforcement Approach to Asbestos Site Cleanup, in Proceedings of the Sixth National Conference of Management of Hazardous Waste Sites, The Hazardous Materials Control Research Institute, Silver Spring, MD (November 1985)). There is no evidence that asbestos is migrating to the river and it is unlikely that this would occur because asbestos adsorbs to sediments and therefore does not migrate through water. Additionally, exposure via these secondary pathways is unlikely since ingestion of surface water and groundwater in the vicinity of the Site is unlikely by humans, therefore exposure via inhalation and direct contact are the most likely. However, these pathways are considered because of the public water obtained from wells across the Delaware River from the Publicker Site. Therefore, the risks associated with the ingestion of contaminated water are believed to be significantly less than those associated with airborne emissions.

Abatement of asbestos waste is required to restrict offsite migration of asbestos and reduce the immediate and potential threat to human health posed by uncontrolled releases. Containment of asbestos, will prevent further degradation of loose piping insulation and reduce future releases. Asbestos control will minimize current and potential future releases by Site workers during Site demolition activities.

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this ROD, amy present an imminent and substantial endangerment to public health, welfare, or, the environment.

Description of Alternatives

Alternative 1 - No Action

Estimated Capital Cost:	$0
Estimated O & M Costs:	$0
Estimated Present Worth:	$0
Estimated Implementation Time:	None

The No Action Alternative is required by the National Contingency Plan (NCP) to be considered through the detailed analysis of remedial alternatives. This alternative provides a baseline comparison to the other remedial alternatives. Under the No Action alternative, EPA would not implement any measures to protect either human health or the environment from the existing threats at the Site.

Under this alternative no action would be taken to remediate the estimated 1,200 to 1,300 cubic yards of asbestos materials. The Site would continue to be accessible to trespassers, and uncontained asbestos would continue to pose a risk to humans and terrestrial and aquatic organisms through the primary and secondary exposure pathways: inhalation, direct contact, and ingestion.

Alternative 2 - Upgraded Site Security (Full-Time)

Estimated Capital Cost:	$37,330
Estimated O & M Costs:	$356,400 for 3 years
Estimated Present Worth:	$393,732
Estimated Implementation Time:	3 months

Under this alternative, Site security would be upgraded to limit further access to the Site. Upgrading Site security would include the upgrading of the Site perimeter fence and the stationing of a continuous security force at the Site. The asbestos waste staging areas would be made more secure.

The estimated 1,200 to 1,300 cubic yards of asbestos waste would remain onsite at the end of three years. Although the risks associated with the asbestos waste would still exist at current levels, Site access would be limited under this alternative, (it would be more difficult for trespassers to gain Site access. Consequently there would be some reduction in the human health exposure potential at the Site, i.e., some of the risk from inhalation and dermal contact would be reduced.

There are no Applicable or Relevant and Appropriate Requirements (ARARs) associated with this alternative.

Alternative 3 - Source Reduction and Offsite Disposal

Estimated Capital Cost:	$293,420
Estimated O & M Costs:	$0
Estimated Present Worth:	$293,420
Estimated Implementation Time:	5 months

This alternative consists of: the removal of asbestos from piping scattered throughout the Site, placement in secure packaging (plastic bags), and staging and preparation for transport and offsite disposal; collection of all asbestos waste previously packaged and staged at the Site, repackaging if necessary, and preparation for transportation and offsite disposal; and transportation of the estimated 1,200 to 1,300 cubic yards of asbestos wastes to a permitted offsite disposal facility (landfill).

This alternative will comply with all ARARs. Because removal of asbestos would occur, the National Emission Standard for Hazardous Air Pollutants (NESHAPs) for asbestos under the Clean Air Act will be met. These requirements are relevant and appropriate to this alternative because they cover situations similar to those of the alternative. The Pennsylvania regulations regarding disposal of residual wastes in a municipal facility, areas prohibited for land disposal, and the requirements for storage and containment during offsite actions are applicable because they regulate how the alternative will be implemented.

Summary of the Comparative Analysis of Alternatives

The NCP requires an evaluation of all the alternatives against the Nine Evaluation Criteria. Alternatives 1, 2 and 3 were evaluated against these criteria to summarize the relative performance of these alternatives against each other. The Nine Evaluation Criteria are:

Threshold Criteria (i.e. criteria that must be met)

- Overall protection of human health and the environment (addresses whether a remedy provides adequate protection and describes how risks are eliminated, reduced, or controlled)

- Compliance with applicable or relevant and appropriate requirements (addresses whether a remedy will meet all of the applicable or relevant and appropriate requirements. These requirements must be promulgated federal or state environmental regulations.)

Primary Balancing Criteria

- Long-term effectiveness and permanence (refers to the ability of a remedy to maintain reliable protection of human health and the environment over time once cleanup goals are achieved)

- Reduction of toxicity, mobility, or volume through treatment (refers to the anticipated performance of the treatment technologies a remedy may employ)

- Short-term effectiveness (addresses the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period until cleanup goals are achieved)

- Implementability (refers to the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement a particular option)

- Cost (includes the estimated capital, operation and maintenance costs)

Modifying Criteria

- State/Support Agency Acceptance (indicates whether, based on its review of the backup documents and Proposed Plan, the State concurs with the remedy)

- Community Acceptance (whether or not the public supports the decision to take a particular action)

1. Overall Protection of Human Health and the Environment

The Source Reduction and Offsite Disposal Alternative (Alternative 3) will substantially reduce the magnitude of risk to human health and the environment by reducing the amount of asbestos onsite. This alternative will eliminate the risk associated with the release of the previously staged asbestos into the environment at the Site, as well as control the future release of the asbestos generated from the Site into the environment at the offsite disposal facility. The inhalation and direct contact pathways for human and environmental exposure would be eliminated because the asbestos would be removed from the Site. The ingestion of the surface water runoff; the ingestion of shallow groundwater discharging to surface water courses; and the ingestion by consumption of contaminated groundwater by humans and environmental receptors would be largely eliminated because the source of the asbestos contamination would be removed. There may be small amounts of

asbestos remaining in the soil, groundwater, and surface water. As previously mentioned, these media are undergoing an RI/FS at the current time.

The Upgraded Site Security Alternative (Alternative 2) would reduce some of the potential for human exposure to asbestos waste at the Site, however human health and environmental threats would persist. This alternative does not mitigate the migration potential of the asbestos in air or surface water. Therefore, the exposure pathways (inhalation, dermal contact, surface water ingestion, and ingestion by consumption of groundwater) for all receptors would be not be addressed.

The No Action Alternative (Alternative 1) provides no protection of either human health or the environment. All exposure pathways, and therefore the risk, would not be eliminated. Because the No Action alternative is not protective, it is not discussed further.

2. Compliance with ARARs

Alternative 3 would comply with all Federal and State ARARs.

There are no ARARs pertinent to Alternative 2.

Neither asbestos, nor asbestos-like material is regulated under the Resource Conservation and Recovery Act (RCRA), therefore the Land Disposal Restrictions are not ARAR.

3. Long-Term Effectiveness and Permanence

Since Alternative 3 includes source-reduction and offsite disposal there should be little to no residual risk at the Site, for asbestos wastes, once the alternative is implemented and completed. This alternative would not require any long-term management or monitoring requirements at the Site, because the waste is being disposed of offsite. Once the asbestos has been removed from the Site, this alternative would maintain reliable protection of human health and the environment on the Site and in the Site's surrounding areas. Substantial uncertainties have not been identified regarding land disposal of asbestos wastes that would require special long-term considerations.

Alternative 2 would not address the asbestos waste at the Site. Consequently, the asbestos would continue to migrate to the air, surface water, and groundwater and therefore remain a threat the human health and the environment. The risk to the human and environmental receptors after the remedy is implemented would not change from the current risk at the Site. There would be some risk reduction to trespassers.

4. Reduction of Toxicity, Mobility, or Volume Through Treatment

Neither Alternative 2, nor Alternative 3 reduces the toxicity, mobility, or volume of the asbestos waste through treatment. Currently there is no known treatment or resource recovery technology that can address asbestos.

5. Short-Term Effectiveness

During the previous asbestos handling and removal activities under the Emergency Removal program at the Site, the results of air monitoring indicated there were no short-term public health concerns associated with the release of the asbestos at the Site. Since Alternative 3 is similar to the original asbestos handling activities, EPA believes that the short-term human health and environmental effects will be negligible, provided that all activities are conducted according to the asbestos removal procedures and regulations.

There would be no short-term effects on human health or the environment as the result of implementing Alternative 2 because this alternative does not consist of disturbing or causing contact with the asbestos waste.

6. Implementability

For Alternative 3, removal and packaging of the asbestos from piping, the collection of previously packaged asbestos wastes, and the transportation and disposal of asbestos wastes would rely on standard asbestos abatement practices, which are proven to be reliable methods for addressing asbestos problems. There are adequate equipment and contractor capabilities available to implement this alternative, on a competitive basis. Additionally, there are permitted disposal facilities in southeastern Pennsylvania that have the capabilities and capacity to accept the type and volume of asbestos waste to be removed from the Site. Technical or administrative problems that could lead to scheduling delays with this alternative are unlikely.

Alternative 2 would not be complicated to implement. Upgrading perimeter fencing and providing for Site security personnel are widely used and are a reliable means for increasing Site security. In addition, security personnel have been previously assigned at the Site. However, considering the Site location, size and condition, and based on previous Site experience, completely preventing unauthorized access or trespassing would still be difficult.

7. Cost

The estimated costs for Alternative 2 are:

Capital Cost:	$37,330
O & M Costs:	$356,400 for 3 years
Present Worth:	$332,773

The estimated costs for Alternative 3 are:

Capital Cost:	$293,420
O & M Costs:	$0
Present Worth:	$293,420

8. State/Support Agency Acceptance

The Commonwealth of Pennsylvania agrees with the selected remedy.

9. Community Acceptance

Public interest at the Site has been minimal. No public meeting was requested. Comments were received from the public during the public comment period and are addressed in the Responsiveness Summary.

The Selected Remedy

The selected remedy for the Site for OU2 is Alternative 3, Source Reduction and Offsite Disposal. The selected remedy consists of the removal of asbestos from piping scattered throughout the Site, placement in secure packaging (plastic bags), and staging and preparation for transport and offsite disposal; collection of all asbestos waste previously packaged and staged at the Site, repackaging if necessary, and preparation for transportation and offsite disposal; and transportation of the estimated 1,200 to 1,300 cubic yards of asbestos wastes to a permitted offsite disposal facility (landfill).

The estimated costs for the selected remedy are:

Capital Cost:	**$293,420**
O & M Costs:	**$0**
Present Worth:	**$293,420**

The estimated implementation time for the selected remedy is five months.

Statutory Determinations

Protection of Human Health and the Environment

The selected remedy will eliminate the risk associated with the release of the previously staged asbestos into the environment at the Site, as well as control the future release of the asbestos waste generated from the Site into the environment at the offsite disposal facility. The inhalation and direct contact pathways for human and environmental exposure would be eliminated because the asbestos would be removed from the Site. The ingestion of surface water runoff; the ingestion of shallow groundwater discharging to surface water courses; and the ingestion by consumption of contaminated groundwater would be largely eliminated because the source of the asbestos contamination would be removed. There may be small amounts of asbestos remaining in the soil, groundwater, and surface water. As previously mentioned, these media are undergoing an RI/FS at the current time.

There are no unacceptable short-term risks or cross-media impacts that will be caused by implementation of the remedy.

Compliance with ARARs

The selected remedy will comply with all the following ARARs and the To Be Considereds (TBCs).

Chemical-Specific ARARs

Clean Air Act, National Emission Standard for Hazardous Air Pollutants (NESHAPs) - Section 112 of the Clean Air Act. (Federal).

40 C.F.R. Section 61.146 - Standard for demolition and renovation: Notification requirements

40 C.F.R. Section 61.147 - Standard for demolition and renovation: Procedures for asbestos emission control

40 C.F.R. Section 61.152 - Standard for waste disposal for manufacturing, demolition, renovation, spraying and fabricating operations

These requirements are relevant and appropriate to the selected remedy.

Location-Specific ARARs

None

Action-Specific ARARs

Regulations promulgated in Pennsylvania Bulletin, Vol. 20, No. 8, Part II, the Environmental Quality Board Proposed Residual Waste Management (February 24, 1990) (State). These requirements are applicable.

Chapter 271 - Disposal of residual wastes in a municipal facility.

Chapter 291 - Areas prohibited for land disposal

Chapter 299 - Requirements for storage and containment during transport for offsite actions

TBCs

Asbestos Control Regulations, Philadelphia Board of Public Health, Air Management Services, Chapter 6-600, Title 6, Health code of the Philadelphia code (Local).

Standards for asbestos control. This TBC is used because of the asbestos removal activities that will occur.

Cost-Effectiveness

EPA believes that since this remedy will eliminate the risks to human health and the environment at an estimated cost of $293,420, the selected remedy provides an overall effectiveness proportionate to its costs, such that it represents a reasonable value for the money that will be spent.

Utilization of Permanent Solutions and Alternative Treatment Technologies or Resource Recovery Technologies to the Maximum Extent Practicable (MEP)

EPA believes that the selected remedy provides the best balance of tradeoffs among the alternatives with respect to the nine evaluation criteria, especially the five primary balancing criteria. The most important of these five criteria in distinguishing between the remedial alternatives that were considered at this Site in making the decision to select the Source Reduction and Offsite Disposal alternative was Long-Term Effectiveness and Permanence. Alternative 2 is not effective in the long term, because the asbestos waste would remain onsite and continue to migrate to the air, surface water, and groundwater. The selected remedy utilizes permanent solutions and treatment (or resource recovery) technologies to the maximum extent practicable. Currently there is no known treatment or resource recovery technology that controls asbestos, therefore treatment of asbestos at the Site is impracticable.

Preference for Treatment as a Principal Element

Because there is no known permanent treatment or resource recovery technology that could effectively address the asbestos, and, thus treatment has not been selected as part of this remedy, the preference for treatment as a principal element is not satisfied by the selected remedy.

Documentation of Significant Changes

The selected remedy, Source Reduction and Offsite Disposal, was the Preferred Alternative was identified in the Proposed Plan. There have been no significant changes to the preferred alternative.

DRAFT

PUBLICKER/CUYAHOGA WRECKING PLANT OU2
ADMINISTRATIVE RECORD FILE * **
INDEX OF DOCUMENTS

III. REMEDIAL RESPONSE PLANNING

1. Report: Revised Draft Work Plan, Volume I, Remedial Investigation/Feasibility Study Publicker Industries Site, Philadelphia, Pennsylvania, prepared by Tetra Tech, Inc., 3/90. P. 300001-300124.

2. Report: Preliminary Health Assessment for Publicker Industries, prepared by the Agency for Toxic Substances and Disease Registry, 9/12/90. P. 300126-300138.

3. Report: Focused Feasibility Study Report, Asbestos Removal Operable Unit, 4/91. P. 300139-300195. A transmittal letter is attached.

4. U.S. EPA Proposed Plan, Publicker Industries/ Cuyahoga Wrecking Site, 4/91. P. 300196-300205.

* Administrative Record File available 12/12/90, updated 4/26/91.

** Additional information pertaining to Publicker/Cuyahoga OU2 can be found in the Administrative Record File for Publicker/Cuyahoga OU1.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428
215-832-6012

June 28, 1991

Mr. Edwin B. Erickson
Regional Administrator
U.S. EPA Region III
841 Chestnut Building
Philadelphia, PA 19107

Re: Letter of Concurrence
Publicker Industries Superfund Site
City of Philadelphia
Record of Decision (ROD)
Operable Unit #2, Asbestos Removal

Dear Mr. Erickson:

The Record of Decision, concerning the specific actions to be taken at the Publicker Industries Superfund Site, has been reviewed by the Department.

The major components of the selected final remedy for the Asbestos Removal, Operable Unit #2, include:

* Removal of remaining asbestos from piping staged throughout the site; placement in secure packaging (plastic bags); staging and preparation for transport and disposal.

* Collection of all asbestos waste previously packaged and staged at the site; repackaging it if necessary; and preparation for transport and disposal.

* Transportation of all collectable asbestos waste directly to an approved and permitted off-site disposal facility (landfill).

I hereby concur with the EPA's proposed actions, with the following conditions:

* The Department will be given the opportunity to concur with future decisions concerning subsequent actions relative to the contaminated Ground Water and Soil Operable Units, and to evaluate appropriate remedial alternatives to ensure compliance with Pennsylvania ARAR's.

* It is understood that EPA is not waiving Pennsylvania ARAR's for any final remedy at this time.

* EPA will assure that the Department is provided an opportunity to fully participate in any negotiations with responsible parties.

* The Department will be given the opportunity to concur with decisions related to the design of the Remedial Actions, to ensure compliance with Pennsylvania cleanup ARAR's and design specific ARAR's.

* The Department's position is that its design standards are ARARs pursuant to CERCLA Section 121 as amended by SARA, and will reserve our right to enforce those design standards.

* The Department will reserve the right and responsibility to take independent enforcement actions pursuant to State law.

* This concurrence with the selected remedial action is not intended to provide any assurances pursuant to CERCLA Section 104(c)(3) as amended by SARA.

Thank you for the opportunity to concur with this EPA Record of Decision.

If you have any additional questions in this matter, please feel free to contact me.

Very truly yours,

Leon T. Gonshor
Regional Director

cc: Office of Environmental Protection
Mr. Snyder
Ms. Hoffman
Mr. Lynn
Mr. Danyliw
Mr. Cole
Mr. Matlock
Mr. Becker
Mr. Olewiler
Mr. Miller
Re (G) LB817

RESPONSIVENESS SUMMARY

PUBLICKER INDUSTRIES SITE
JUNE 1991

During the public comment period from 4/29/91 to 6/11/91 no comments were received from the public. One set of comments were received from a Potentially Responsible Party. Due to the brevity of these comments they are addressed individually below.

COMMENT: The uncontained asbestos wastes does not constitute a risk because there is no evidence of releases; therefore the statement that the site "poses a substantial risk to human health and the environment" should be deleted.

RESPONSE: Sampling results collected during the Removal Actions in 1989 indicate that asbestos waste is present at the site. The potential for releases to the environment ,therefore, does exist. Some of the materials are known to be uncontained and there are still some human activities on the property. Consequently, the asbestos could be disturbed or even removed from the site, and EPA has determined that a substantial risk is present.

COMMENT: The Focused Feasibility Study (FFS) states that "No definitive risks can be determined for the likely exposure of the public to asbestos at the site." The commentor feels that this is contradictory to the Agency position that there is a substantial risk.

RESPONSE: The statement is intended to describe the present risks from the uncontained asbestos on the site but does not describe the potential for releases and exposures if someone should enter the site (such as trespassers) and disturb the material or remove it from the site. The only reasonable and conservative way to protect the public is to remove and properly dispose of the materials.

COMMENT: Since there is no release of asbestos from the site, Alternative 3 will not reduce the magnitude or eliminate the risks.

RESPONSE: Once again, the potential for release is a real risk associated with the uncontained materials and bagged asbestos. Alternative 3 will reduce and eliminate the risks.

COMMENT: Since there is no releases occurring and the site, the possibility of the occurrence of a release which exceeds the Clean Air Act is unlikely during periods of little or no activity.

RESPONSE: The potential still exists when the materials are uncontained on the site. Unauthorized activities may occur and release could exceed the Clean Air Act limits.

COMMENT: The public acceptance of the proposed alternative because of the substantial reduction in the risk is misleading because there is no current human exposure and the risks have not been quantified.

RESPONSE: The potential for releases is real and the public has been very concerned about protection of their community and individual health of the residents.

COMMENT: The FFS contained only limited information about the groundwater aquifers at the site and any assessment of the transport of asbestos in the groundwater and surface waters is inadequate to assess the likelihood of exposure.

RESPONSE: EPA agrees that the groundwater and surface water pathways are not defined and are probably not a potential pathway for transport of the asbestos. These pathways were considered because of the public water obtained from wells across the Delaware River.

COMMENT: Based on the fate and transport properties of asbestos it is unlikely that asbestos fibers could migrate to the deeper aquifers and beneath the river to reach the wells across the Delaware River from the site.

RESPONSE: EPA agrees with this comment.

COMMENT: The statement that, "Quantitative data do not exist to document levels of asbestos exposure associated with releases from the Publicker site" is incorrect and the Agency should have used the OSC's report that no airborne asbestos above permissible limits was detected during site activities.

RESPONSE: Since the asbestos materials are present and exposed to the surface at the site, the potential for release is the risk. Since there are trespassers on the property the possibility of a release does exist, even though EPA does not have documentation of concentration measurements of any releases.

COMMENT: A statement in the risk assessment comparing ingestion of asbestos-contaminated groundwater to airborne emissions is misleading since there is no evidence of contaminated groundwater.

RESPONSE: The statement only compares the relative risk and was not intended to presume contamination of groundwater is present.

COMMENT: A statement that containment of the asbestos will reduce further releases is also misleading because no current releases have been documented.

RESPONSE: The possibility of a release is real and containment and proper disposal will certainly reduce the possibility of any releases.

COMMENT: The FFS does not document that asbestos is really present at the site and the Administrative Record does not contain this information either.

RESPONSE: The analysis for asbestos was conducted as part of the Removal Activities. The fibrous materials were sent to Electron-Microscopy Service Laboratories Inc. (EMSL) for analysis and the documentation received by EPA was Dated December 29, 1989. This documentation will be added to the final revision of the FFS and will subsequently become part of the Administrative Record.

COMMENT: The FFS does not clearly describe the compliance with ARARS for the alternatives evaluated.

RESPONSE: The ARARS that must be evaluated are outlined in the current Record of Decision and are explained within this document. Some clarification will be added to the final version of the FFS.

COMMENT: The FFS incorrectly identifies requirements of the Philadelphia Code as an ARAR.

RESPONSE: The Philadelphia Code requirements are now listed as "To Be Considereds".

COMMENT: ARARs are generally categorized as being chemical-, location-; or action-specific. The FFS does not identify these categories in tabular form.

RESPONSE: The Record of Decision clarifies these categories and revisions will be made when finalizing the FFS.

COMMENT: The FFS does not address regulations regarding demolition activities when asbestos is present.

RESPONSE: The ARARs for demolition have been included in the Record of Decision and will be added to the final revision of the FFS.

COMMENT: The FFS defines the scope of the asbestos operable unit for the site as only the staged and exposed asbestos present on the ground throughout the site. No rationale was provided for leaving other suspected asbestos on the site. In addition, this limited action is not cost effective.

RESPONSE: This remedial action is not intended to address all the asbestos which is an integral part of the structure of the buildings. That will be addressed by EPA if and when the buildings are demolished as part of Superfund response activities. This operable unit will provide the assurance that none of the uncontained materials will be released or transported from the site which will affect the public health or the environment. Increasing the scope of this operable unit to

include building demolition is not warranted and would not be cost effective at this time.

COMMENT: The FFS does not set forth specific numerical goals or acceptable levels for each exposure route.

RESPONSE: Since this not the final remedy for the entire site the risk assessment for this early action ROD is qualitative and does not attempt to assess all environmental concerns and potential exposure pathways.

COMMENT: The FFS report covers the short-term effectiveness criterion but does not address the subcriteria for short-term effectiveness.

RESPONSE: The subcriteria are addressed in the Record of Decision.

COMMENT: The FFS report erroneously states that below-ground process lines are present at the Publicker site.

RESPONSE: The Record of Decision addresses this issue and the final revision of the FFS will be corrected.

COMMENT: The FFS should not have evaluated the State and Community acceptance criterion.

RESPONSE: Based on previous meetings with the community and discussions with the State, EPA felt that the acceptance described in the FFS was accurate. In addition the State has agreed in writing with this statement.

COMMENT: The present worth calculations in the FFS for Alternative 2 are incorrect.

RESPONSE: This correction was made in the Record of Decision and will be included in the final revision of the FFS.

COMMENT: The Proposed Plan refers to other asbestos materials inside the buildings and that will be further evaluated during subsequent activities planned at the site. However, the RI/FS work plans do not address asbestos.

RESPONSE: This statement was made to provide the public with clear notice that the asbestos which is an integral part of the buildings was not included in this remedy selection. Subsequent activities may address asbestos materials inside the buildings, although no activities are currently planned.